Fermilab

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Dear Mike,

We believe that a compelling physics case, based on the tantalizing prospect of observing (or excluding) a standard model Higgs, has been made for a Run 2B with an integrated luminosity of > 15 fb^{-1}. The consensus within the field for the last decade has been clear: understanding the origin of electroweak symmetry breaking is the highest priority. This is a question that needs to be and will be answered experimentally. Through good luck and good judgment, Fermilab has a real opportunity to be the place where this happens. Aside from being a major discovery, such an achievement would provide a firm foundation on which to build the future Fermilab (and US) HEP program. But this will only occur if we seize the opportunity which we have been given. (It is sobering to note that if "typical" Fermilab scheduling applies, Run 2B will fail because it will be delayed into the LHC era).

As you know, we cannot just rely on the existing collider detectors or the accelerator complex to achieve our luminosity goal. Run 2B will require significant ongoing investment of people and funds in luminosity upgrades, in the detectors themselves and in the computing facilities. It is imperative that the laboratory maintain a clear stance, in word and deed, that this activity is its highest priority and that sufficient resources be made available. Our concerns have been raised by the discussions of major new experiments at the PAC (with potential serious impact on laboratory resources and on the luminosity delivered at BØ and DØ). We are also worried that many people seem to have the impression that copious resources will be freed up by the "completion" of the Run 2 detectors, and so the time is ripe for new initiatives. While our needs will surely change, the Run 2 program is in fact just beginning and it will require significant resources to complete this program properly. We would like to make sure that a boundary condition for any new project undertaken by the laboratory is that it have no negative impact on the Run 2B physics program. We can't afford to mess this up.

with best regards

John Womersley & Harry Weerts